Courtesy of State History

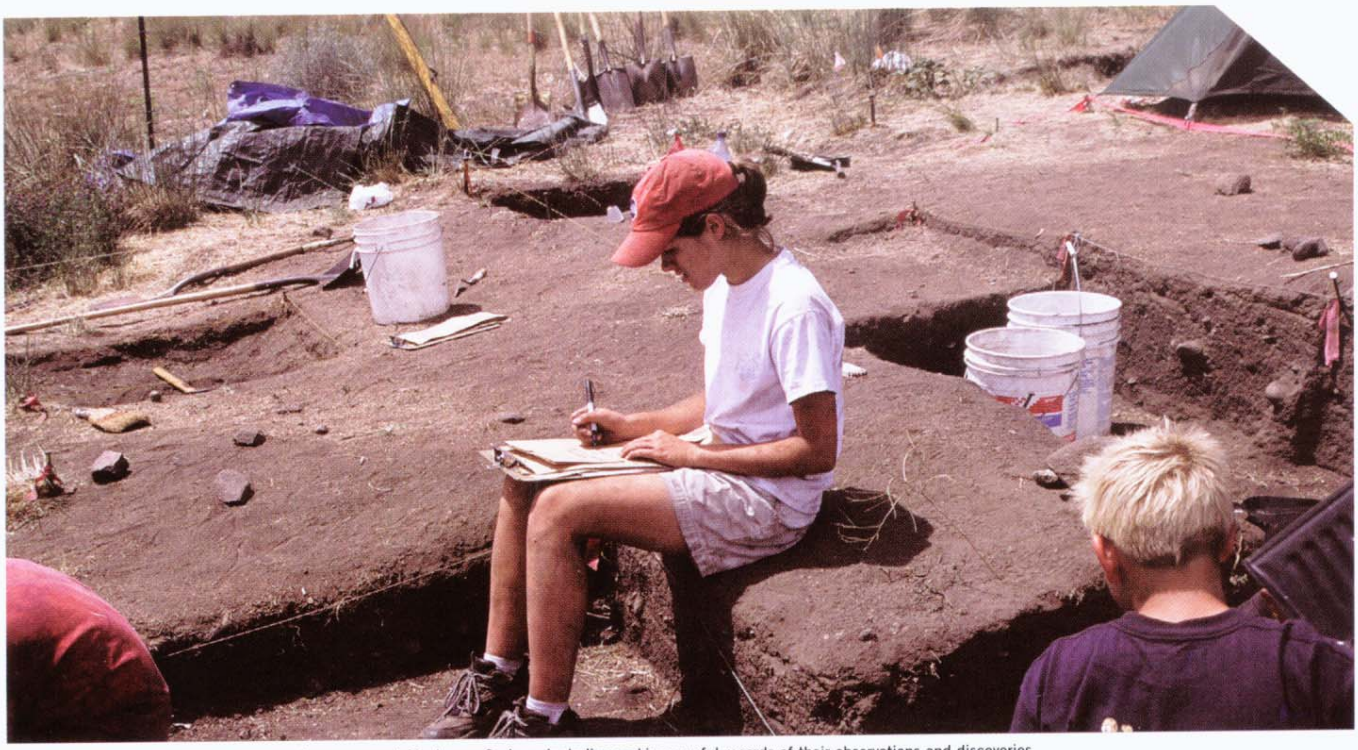
Kids discover the excitement of unlocking secrets of the past at the Mushroom Springs.

FROM THE MUSHROOM SPRINGS ARCHAEOLOGICAL SITE ON THE EASTERN SIDE OF ANTELOPE ISLAND, YOU CAN SEE THE TALL BUILDINGS OF DOWNTOWN SALT LAKE CITY, THE BUSY STREETS OF BOUNTIFUL, AND THE MALL AT KAYSVILLE. BUT IT IS THE REMNANTS OF AN ANCIENT LIFE, NOT THE PROXIMITY OF THE MODERN WORLD, THAT GRABS KIDS' ATTENTION AT MUSHROOM SPRINGS. HERE THEY HELP UNLOCK SECRETS OF THE PAST AS THEY WORK ALONGSIDE PROFESSIONALS ON A REAL ARCHAEOLOGICAL "DIG." AS STUDENTS LEARN AND APPLY THE SCIENTIFIC PROCESS, THEY CONTRIBUTE TO OUR UNDERSTANDING OF THE ANCIENT FREMONT PEOPLE. AS THEY MAKE PERSONAL CONNECTIONS TO THE PAST, THEY BECOME THE FUTURE STEWARDS OF UTAH'S RICH ARCHAEOLOGICAL RESOURCES.

Kids Get "Down and Dirty"

Courtesy of State History

Kids get the chance to work with professional archaeologists, like Jim Dykman (center), on the Mushroom Springs project.



Courtesy of State History

Kids take part in all aspects of the excavation process at Mushroom Springs, including making careful records of their observations and discoveries.

at Mushroom Springs

By Ronald J. Rood
Utah Assistant State Archaeologist

Discovery at Mushroom Springs

Freshwater springs dot Antelope Island and, in the Great Basin, anywhere there is fresh water there are traces of the prehistoric past. Utah State Parks officials planned to tap into the water at Mushroom Springs for the new facilities at the historic Fielding Garr Ranch, located about one mile to the east. During the construction project, an archaeologist from Utah State Parks noticed clues—bits of charcoal, fragments of broken rock, fragments of animal bone, chipped stone, gray pottery shards, and grinding stones—suggesting humans had used this area in the past.

Utah State Parks and the Utah Division of State History Antiquities Section excavated a few "test pits" at Mushroom Springs to better understand the nature of the site and the soil. Analysis of the artifacts recovered in these tests suggested Mushroom Springs had the potential to produce important information about Utah's prehistoric past. Since the site was inadvertently damaged during the construction, Utah State Parks and the Antiquities Section developed a plan to retrieve information from the site in a cost-effective partnership focusing on public education and opportunities for kids to work on a real archaeological site.

Public education is an important strategy for preserving Utah's extraordinary archaeological resources. Unfortunately, many of these resources are at risk from vandalism, looting, and simply being "loved to death" by visitors. One of the best protections we can provide these sites is a public that is aware of the value of archaeological resources and understands proper archeological site "etiquette."

Asking Questions

Questions are the root of archaeological investigations. The artifacts recovered from a site and their context allow archaeologists to attempt to answer questions. Thus, before inviting the public to participate in excavating the Mushroom Springs site, we prepared a research design to guide the fieldwork. The research design identifies the types of information archaeologists hope to recover and how that information will be gathered.

Not every site can address every type of question and Mushroom Springs is no exception. Based on information from test digs, it was clear that Mushroom Springs likely contained information on diet, hunting patterns, and butchering patterns. In addition, the large amount of burned rock and burned animal bone had potential to yield samples for radiocarbon dating that shed light on the age of the site.

Unlocking Secrets of the Past

The Antiquities Section has been working with students for over ten years. Through our public outreach program, professional archaeologists have brought presentations on Utah's archaeological resources to over 300 fourth and seventh grade classrooms. With the discovery at Mushroom Springs, we had an opportunity to take this outreach one step further by involving kids in a real "dig" and laboratory work.

Since 2001, over 80 students from Newman Elementary School and Escalante Elementary School in Rose Park, Our Lady of Lourdes School in Salt Lake City, and the Colby School in Park City have participated in the archaeological work at Mushroom

Springs. In addition, other students from around the Wasatch Front interested in archaeology have become involved as individuals.

With the input of Danielle Patterson, a Salt Lake City educator and one of the original authors of the nationally-recognized "Intrigue of the Past" archaeology curriculum, we designed an inter-disciplinary, hands-on program at Mushroom Springs. The students develop research questions, create photographs and art, and write each day about their experiences. Several of the students' contributions will be used in the final report.

Through fieldwork and lab work, the students quickly learn that archaeology is more than the random collection of artifacts. During the first season at Mushroom Springs one 12-year-old participant said, "Archaeology is sort of like dissecting a frog," and it truly is. As students create maps and grids and take copious notes, they begin to understand the scientific process of forming questions and using the data to test their ideas. They start to think of potsherds, arrowheads, and bone fragments not as curios from long ago, but as threads of scientific data—information telling a story about the people that lived at Mushroom Springs 1,000 years ago.

Making it Personal

Working at Mushroom Springs helps students make personal connections with the people of the past. One student, for example, wrote a narrative on what being a 12 year-old kid living at Mushroom Springs must have been like. The student imagines the inhabitants of Mushroom Springs 1,000 years ago as people with feelings, needs, and a sense of humor. The passage also clearly shows the student's understanding of the relationship between artifacts (fire-cracked rock) and human behavior. It paints a picture of ancient life based not on a lecture or reading a book, but on a first-hand experience.

> Is it morning already? Another day of hauling rock for the fires. O well, we'll have lots of bone grease for winter food. I hope the hunters get more antelope today. Making bone grease is hard work but I like helping my mom crack the bones and then put them into the pot. My brother likes taking the hot rocks from the fire and putting them in the pot. The hissing noise is funny and the water really boils up. My brother is learning how to make arrowheads but he's not very good. He keeps breaking them. He gets mad and it's funny. I like coming to the island even though it is hard work hauling rocks for the fire and making the bone grease. Soon we'll cross the lake in our little boats and go back to the big village by the river for the winter.
>
> (A. Rogers, age 12)

In addition to participating in the archaeological dig, the Mushroom Springs project offers learning opportunities for students with a range of interests. A young man named Austin Watkins was intrigued by the 35mm cameras and photography. After a quick lesson, he became our site photographer for several days. He learned to set up the photo-board and document on paper every photo he took. Students interested in art took a workshop on illustrating artifacts from Ron Taylor, Antelope Island State Park manager, who has substantial skills in scientific illustration.

Students work hard at Mushroom Springs though the heat on the island is often brutal. In spite of canvas shades and plenty of water, the work day typically ends at 2:00 pm with students running through the sprinklers under the cottonwood trees at the Fielding Garr Ranch.

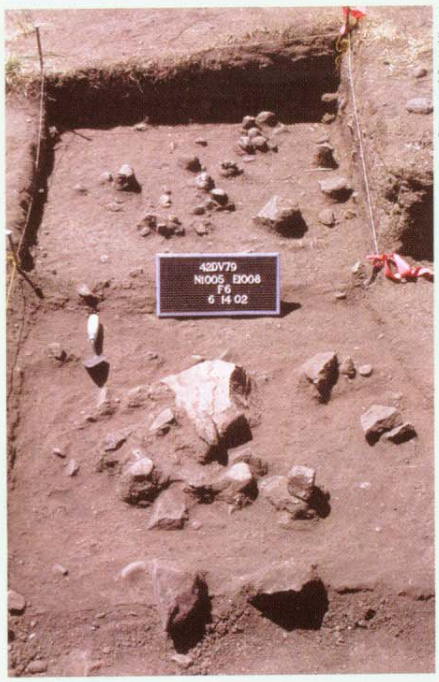
Research Results

With the assistance of student archaeologists, we have learned a great deal about ancient life at Mushroom Springs. Although there are hints of earlier occupations, most of the material excavated at Mushroom Springs dates to about 1,000 years ago. Archaeologists call materials from this time period "Fremont," a term used to describe an ancient group of Native Americans who lived over much of Utah. The Fremont grew corn, lived in pithouse villages, made pottery, and used the bow-and-arrow. They also made their living by hunting and gathering a wide variety of plants and animals.

Hunting, butchering, bone processing, and plant processing are the major activities associated with the Fremont occupation at Mushroom Springs. We found bones from a variety of animals, including antelope, deer, bighorn sheep, bison, and rabbits at the site. All of this bone is fragmented and splintered suggesting the production of bone grease and the extraction of bone marrow for food. Bone grease was an important source of fat and calories in prehistoric diets. Native people mixed it with dried meat and berries.

Large numbers of hammer stones and anvil stones, along with thousands of kilograms of fire-cracked rock, are further evidence of bone grease production. The grinding stones found at Mushroom Springs indicate plant processing, but we are not sure what plants were being used.

While we have learned much at Mushroom Springs, many questions remain. For example, we know bone grease production was important, but exactly how was it accomplished? What season of the year were they making bone grease? Fall? Spring? Both? Continued research and fieldwork will help us piece this story together.



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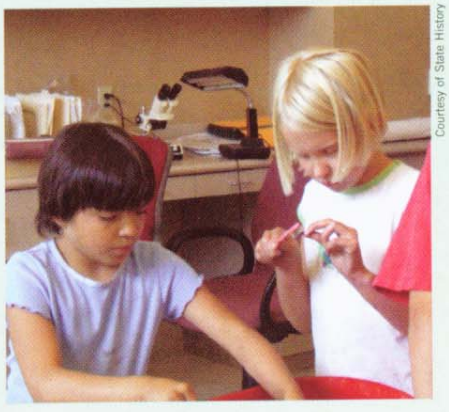

Courtesy of State History

Top left: Large quantities of fire-cracked rock are evidence of bone grease production at Mushroom Springs. **Top right:** A student displays the arrow points she discovered. **Middle left:** Archaeologists covered the site with a shade dome in 2006. **Middle right:** Assistant State Archaeologist Ron Rood and veteran Mushroom Springs participant Nikel Taylor. **Bottom left:** A Mushroom Springs crew sweats it out on a hot afternoon. **Bottom right:** After working at the excavation site, kids spend a week in the lab analyzing the artifacts they found.

When we were at Mushroom Springs on Antelope Island, everyone got to unlock some secrets of the past. I personally love to get down and dirty, but getting dirty wasn't all I loved about my experience at Mushroom. I loved the mysteries of finding new objects and discovering what they were. My mother would take my picture before the dig began and then after. Oh man, there would be a thick layer of black dirt all over my face and arms.

One day I was walking back from the sifter to the grid I was working and saw a piece of pottery just lying in the open. I picked it up and showed it to Ron Rood, State Archeologist. He was surprised that I found it in the middle of the open ground. Another time I was digging in my grid and wasn't finding anything. After a while I heard a thud. I started to dig around and uncovered a huge pile of FCR or fire cracked rock. Underneath the rock we found a rib bone of an animal. It was really cool. I would recommend going to a dig site to anyone who loves discovery and getting down and dirty.

- Nikel Taylor

Taking Ownership

As a professional archaeologist, the significance of a project like Mushroom Springs to me is twofold. First, the site is like an undiscovered library of books and manuscripts about life in Utah. The artifacts, the butchered animal bone, and the ubiquitous fire-cracked rock all combine to tell a story about how people made their way in what we now call Utah thousands of years ago. Our excavations at Mushroom Springs will teach us volumes about ancient Utah.

Secondly, as I watch fourth grade students carefully excavate around a piece of bone or a pottery shard, get the map, plot the artifact's location, and carefully write notes about their find, it is clear that these students will never harm an archaeological site. Working with real archaeologists on a significant site gives these kids a sense of respect for the site and the people who lived here over 1,000 years ago. They become active owners and protectors of Utah's cultural heritage. ❋

Ronald Rood, Utah Assistant State Archaeologist, has worked at the Division of State History, Antiquities Section for ten years. He works extensively with the public on archaeological education, preservation, and stewardship. He can be reached at rrood@utah.gov.

Courtesy of State History

The Mushroom Springs project engages kids with many different interests. This student was responsible for documenting the excavation with photos.